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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,730	12/16/2003	Moo Yeol Park	8734.049 C1	3685

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EXAMINER	
HINES, ANNE M	

ART UNIT	PAPER NUMBER
2879	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/735,730	PARK ET AL.	
	Examiner	Art Unit	
	Anne M. Hines	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,19 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/124,709.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 12, 2007 has been entered.

Claims 1-16 and 19-20 are pending in the instant application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16 and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Majima (US 5724110) (of record).

Regarding claim 1, Majima discloses a method for fabricating a liquid crystal display panel, including: forming a closed pattern of a UV sealant (Fig. 7, 3; Fig. 6, 17; Fig. 3, 15; column 7, lines 32-34; column 6, lines 1-19 and lines 56-60) on a first substrate (Fig. 6, 1; column 7, lines 1-4; photocurable means cured using light, the examiner interprets this to include light in the ultraviolet wavelength); dropping a

plurality of droplets of liquid crystal (Fig. 3,15; column 6, lines 1-19 and lines 56-60) on a second substrate (Fig. 3, 1'; column 6, lines 56-60); attaching the first and second substrates (Fig. 4; column 6, lines 56-60); hardening the UV sealant other than the UV sealant on the regions where the UV sealant and at least one scribing line are crossed (Fig. 6, 14; column 7, lines 1-11; Fig. 7, 3 and 5; column 7, lines 23-35; the photomask causes the sealant to migrate to the areas exposed to the UV radiation, therefore the region 5 is not cured) by irradiating a UV ray on the attached substrates (column 7, lines 12-15 metal halide lamps produce light in the ultraviolet wavelength range) with masking regions (Fig. 6, 14; column 7, lines 1-11) where the UV sealant and at least one scribing line are crossed (Fig. 4, 15; column 6, lines 56-60; the UV sealant is initially on the entire substrate); wherein the UV sealant on the regions where the UV sealant and at least one scribing line are crossed is not entirely cured (Fig. 7, 3 and 5; column 6, lines 1-19; the sealant migrates to only areas where light is irradiated upon the substrate; column 7, lines 23-35, there is not curable compound in the scribing regions, 5) and cutting the bonded substrates into a plurality of unit cells (column 7, lines 36-38).

Regarding 2, Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking upper and lower side portions of the crossed regions between the UV sealant and the scribing line (see Fig. 6, item 14; column 7, lines 1-11; the mask covers the region of the scribing lines).

Regarding claim 4, Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking an active region (see Fig. 6, item 4, item 14; column 7, lines 1-11; the only areas that are irradiated are the

areas where the sealant is to be formed, which is not the active region) in addition to masking upper and lower side portions of the crossed regions between the UV sealant and the scribing lines (see Fig. 7, items 3 and 5; column 7, lines 23-34; the mask will be on the right and left side of the seal line to form the seal, the examiner interprets the left and right side of the seal line as above and below the seal line in the horizontal direction).

Regarding claims 3 and 5, Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking left and right side portions of the Crossed regions between the UV sealant and the scribing lines (see Fig. 6, item 14; column 7, lines 1-11; the mask covers the region of the scribing lines).

Regarding claim 6, Majima further discloses that the UV sealant surrounds the plurality of the unit cells (see Fig. 7, item 3; column 7, lines 22-35).

Regarding claim 7, Majima further discloses masking an active region inside the main sealant (see Fig. 6, item 16; column 7, lines 1-11).

Regarding claim 8, Majima further discloses that the UV sealant (see Fig. 7, item 3; column 7, lines 22-35) forms at an outside of the main sealant (see Fig. 7, item 4; column 7, lines 22-35).

Regarding claim 9, Majima further discloses wherein the UV sealant includes one of monomer and oligomer each having both ends coupled to an acrylic group (column 5, lines 40-44).

Regarding claim 10, Majima further discloses that the main UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the

other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

Regarding claim 11, Majima further discloses that the UV sealant includes one of monomer and oligomer each having both ends coupled to an acrylic group (column 5, lines 40-44).

Regarding claim 12, Majima further discloses that the main UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

Regarding claim 13, Majima further discloses heating the UV ray irradiated substrates with masking crossed regions between the UV sealant and the scribing lines (see Fig. 6, item 14; column 6, lines 1-19; the irradiation of the substrate will also heat the substrate), wherein the UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

Regarding claim 14, Majima further discloses that the scribing line is formed on the bonded substrates (see Fig. 7, items 5 and 6; column 7, lines 23- 26).

Regarding claim 15, Majima further discloses that the cutting the bonded substrates into a plurality of unit cells is performed by scribing and breaking simultaneously (column 7, lines 36-38, dicing will simultaneously scribe and break the substrates).

Regarding claim 16, Majima further discloses including forming at least one

column spacer on the first substrate (see Fig. 6, item 17; column 6, lines 1-19; the column spacer is formed from the sealing material and is joined to both As to claim 18, Majima disclose the method of claim 1. Majima further discloses that the UV sealant is formed on the first substrate (see Fig. 5, item 15; column 6, lines 61-67; the UV sealant is formed to be injected between the two substrates), and the plurality of droplets of liquid crystal is dropped onto the second substrate (see Fig. 5, item 15; column 6, lines 56-67; the liquid crystal is dropped between the two substrates and is therefore formed on the second substrate).

Regarding claim 19, Majima further discloses wherein dropping a plurality of droplets of liquid crystal includes dropping at least one droplet of liquid crystal onto each of the plurality of unit cells (see Fig. 10, item 10; column 8, lines 55-63; the injection hole in each cell allows for droplets to be dropped into each individual cell).

Regarding claim 20, Majima further discloses that the hardening includes hardening all the UV sealant other than the UV sealant on the regions where the UV sealant and at least one scribing line are crossed (see Fig. 6, item 14; column 7, lines 1-11; see Fig. 7, items 3 and 5; column 7, lines 23-35; the photomask causes the sealant to migrate to the areas exposed to the UV radiation, therefore the region 5 is not cured).

Response to Arguments

Applicant's arguments filed September 12, 2007 have been fully considered but they are not persuasive.

With regard to claim 1, Applicant argues that the Majima reference does not disclose "forming a closed pattern of UV sealant on a first substrate" and "dropping a plurality of droplets of liquid crystal onto a second substrate" as required by claim 1. Applicant further argues that in their claimed invention the closed pattern of UV sealant and liquid crystal are separately formed without mixing the UV sealant and the liquid crystal material as Majima discloses.

The Examiner respectfully disagrees. Claim 1 requires that a closed pattern of UV sealant is formed on a first substrate and that a plurality of liquid crystal droplets are dropped onto a second substrate. It does not preclude the sealant from being dropped onto the second substrate prior to forming the closed pattern of UV sealant on the first substrate. In fact, claim 1 does not require an order of these operations, only that they both occur during the process of fabricating a liquid crystal display panel. Despite the fact that Applicant's disclosure exemplifies a process in which these two steps are separate, the Examiner is required to give the claims their broadest reasonable interpretation; as such, Majima discloses the invention of claim 1. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne M. Hines whose telephone number is (571) 272-

2285. The examiner can normally be reached on Monday through Friday from 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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